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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,430	08/08/2001	Katsumi Kurematsu	1232-4753	5154

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EXAMINER

ROBINSON, MARK A

ART UNIT	PAPER NUMBER
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2872

DATE MAILED: 12/09/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/924,430

Applicant(s)

KUREMATSU ET AL.

Examiner

Mark A. Robinson

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 6,7 and 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5,8 and 10-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of species a. (figs. 1 and 2) in Paper No. 7 is acknowledged. Claims 1-5,8 and 10-19 read on the elected species and will be examined on the merits as follows.

Claims 6,7 and 9 are withdrawn from consideration as being drawn to non-elected subject matter.

### *Claim Rejections - 35 USC § 112*

2. Claims 1-5,8,10-15 and 17-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1,15 and 19 contain text in parenthesis. It is unclear if this text is intended to be included in the claimed combination, thus rendering the claims indefinite.

In claim 17 "said curved mirror" is ambiguous as more than one such mirror has been recited previously.

In claim 18 it appears that "side" was omitted at the end of the claim, in reference to the position of the aperture stop.

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The remaining claims inherit the deficiencies of the independent claims.

Inasmuch as the claims are able to be understood in light of the 112 rejections made above, the following rejection(s) apply:

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1,13-15 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Negishi et al (5,871,266).

Negishi shows a display apparatus including display means(2) which includes an arithmetic unit supplying information to the display, and a projection system(3) including a plurality of aspheric mirrors (see figs. 4-6) projecting light onto the rear of a surface.

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***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 2-5,8,10-12 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Negishi et al in view of Braat (6,255,661)

Negishi does not show the projection system to include six mirrors. However, Braat shows a projection system including six aspheric mirrors (mirrors 5-10) with a stop(13) between the second and third mirrors. It would have been obvious to the ordinarily skilled artisan at the time of invention to use the projecting mirrors of Braat with Negishi's display system because providing additional aspheric mirrors would yield the benefit of better image correction. Note also that an increase in the number of mirrors would provide additional degrees of freedom in designing for correction of aberrations.

Regarding claims 4 and 5, Negishi shows a fold mirror(3f) located after the curved mirrors.

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Regarding claim 11, although not shown by the references, use of an additional common fold mirror would have been obvious at the time of invention in order to produce a more compact system.

Regarding claim 12, Negishi in view of Braat does not teach the projection surface to include Fresnel plates. However, projections screens having such an arrangement are well known in the prior art. It would have been obvious at the time of invention to use Fresnel plates with the projection surface of Negishi in view of Braat in order to provide directional control of the emerging light.

The limitations of claims 16-18 are either met by or obvious over Negishi in view of Braat as discussed above.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Robinson whose telephone number is (703) 305-3506.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cassandra Spyrou can be reached at (703) 308-1687. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7722.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

MR

12/2/02

  
MARK A. ROBINSON  
PRIMARY EXAMINER